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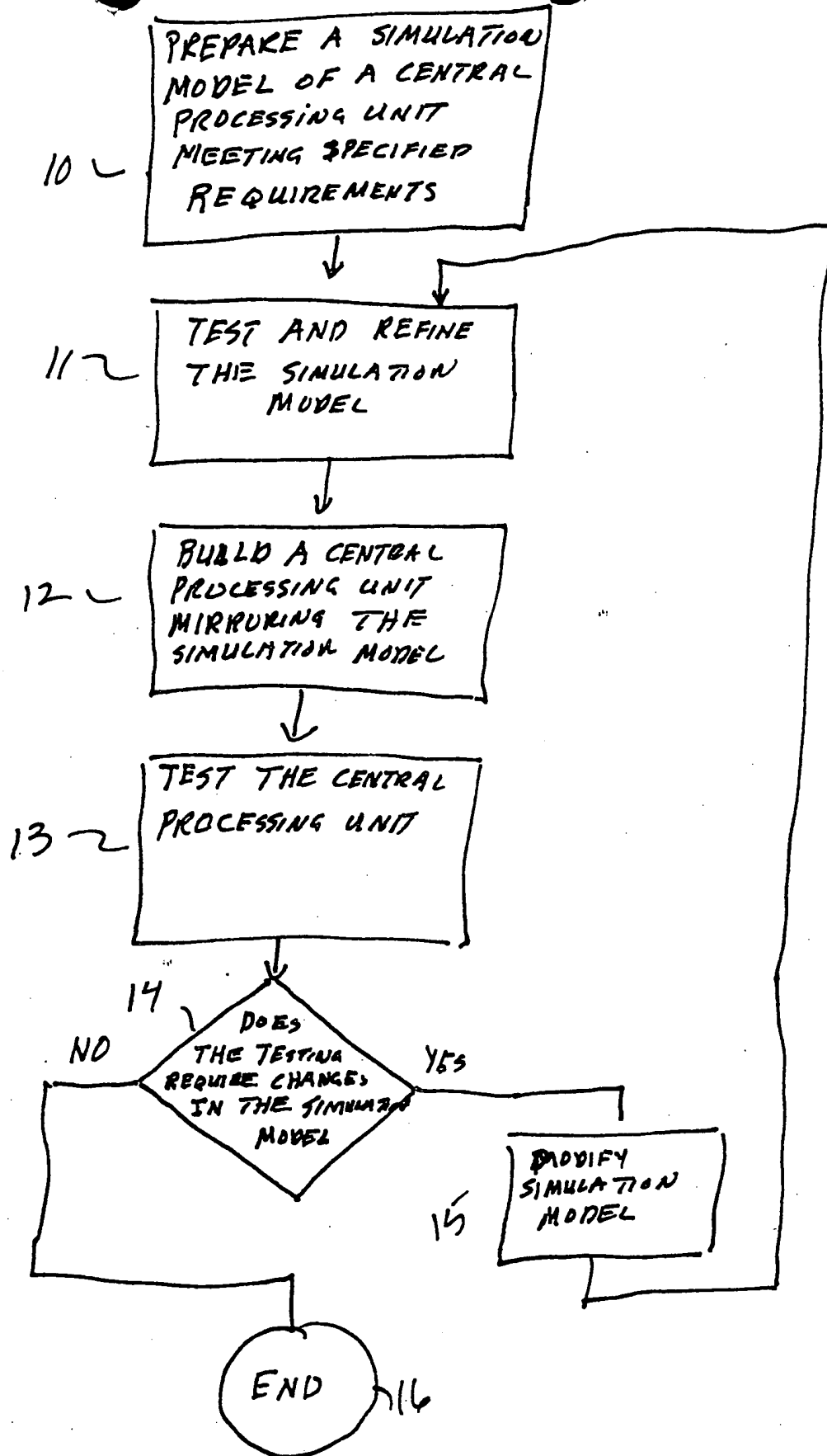


Fig. 1

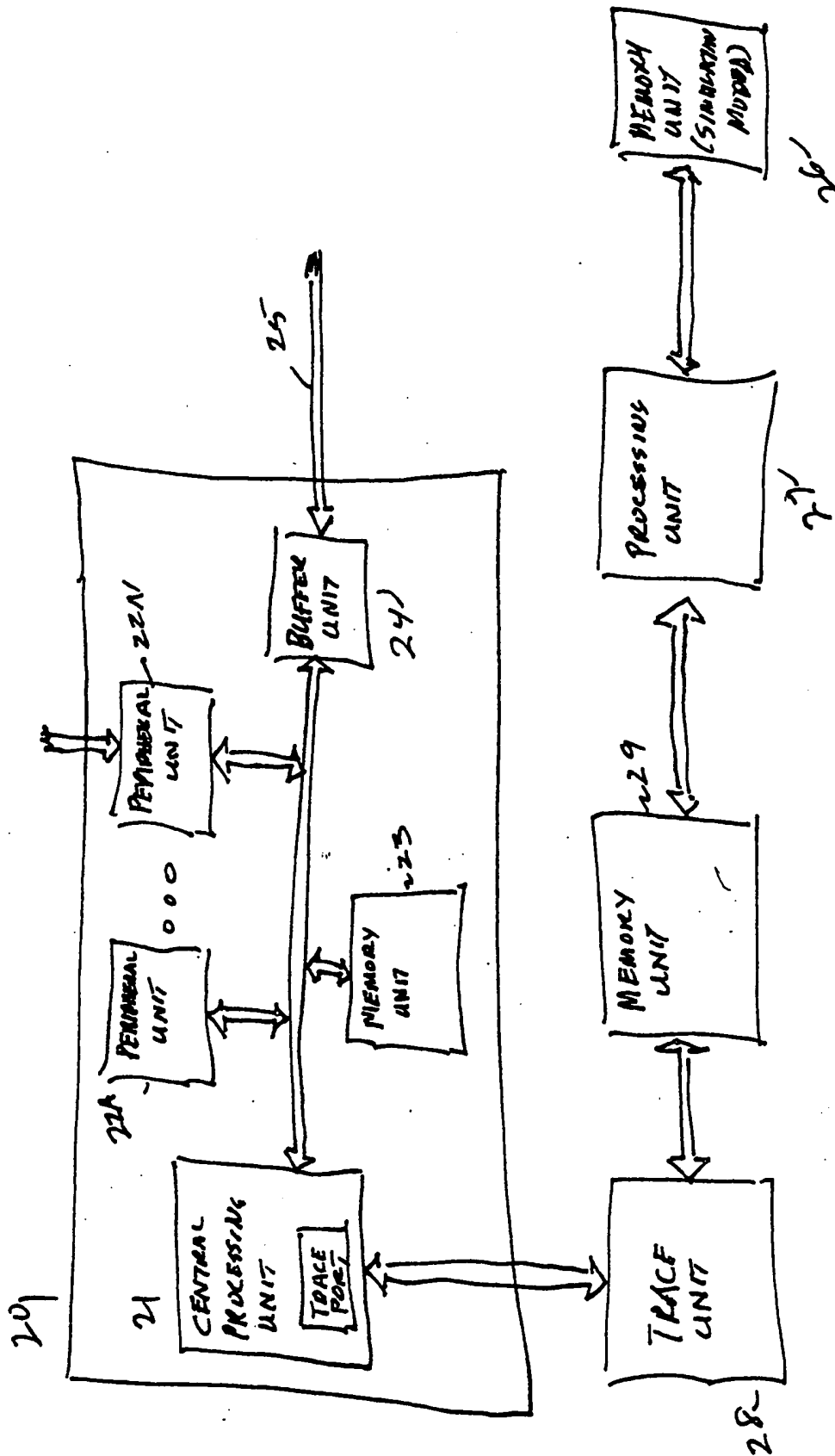


Fig. 2

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graph TD
    32[32 - SAVE STATE OF THE CENTRAL PROCESSING UNIT] --> 33[33 - EXECUTE THE PROGRAM BY THE CENTRAL PROCESSING UNIT]
    33 --> 34[34 - USING TRACE COMPONENTS, DETERMINE INPUT AND OUTPUT SIGNALS AND MACHINE STALLS FOR EACH PROGRAM CLOCK CYCLE]
    34 --> 35[35 - INITIALIZE STATE OF SIMULATION MODEL TO SAVED CENTRAL PROCESSING UNIT STATE]
    35 --> 36[36 - APPLY INPUT AND OUTPUT SIGNALS TO THE SIMULATION MODEL TO DETERMINE STATE OF THE CENTRAL PROCESSING UNIT]
    36 --> 37[37 - FROM THE STATE OF SIMULATION MODEL AND THE POWER DISSIPATED, DETERMINE POWER CONSUMPTION FOR EACH CLOCK CYCLE]
    37 --> 38[38 - DETERMINE POWER CONSUMPTION AS A FUNCTION OF PROGRAM EXECUTION]
    38 --> 39[ADJUST PROGRAM TO REDUCE POWER CONSUMPTION]
    39 --> 32
    30[30 - DEVELOPE A SIMULATION MODEL FOR THE CENTRAL PROCESSING UNIT] --> 31[31 - DETERMINE THE POWER DISSIPATED BY THE CENTRAL PROCESSING UNIT FOR EACH STATE]
    31 --> 37
  
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